REMARKS

In view of the above amendments and the following remarks, reconsideration of the outstanding office action is respectfully requested.

By the above amendments, claims 103-104, and 107 have been amended and claims 105-106 and 110-111 have been canceled. Claims 103-104, 107-108, and 112 are pending.

The rejection of claims 103-104, 107-108, and 111 under 35 U.S.C. § 112 (1st para.) for lack of enablement is respectfully traversed.

The U.S. Patent and Trademark Office ("PTO") acknowledges that the specification is enabling for methods of inhibiting programmed cell death in plant eukaryotes with SEQ ID NO: 2. However, the PTO continues to assert that the specification does not provide enablement for inhibiting programmed cell death in all eukaryotes with any bacterial effector protein. Applicants disagree.

As submitted in applicants' previous response, the examples of the present application are not limited to use of the claimed effectors in plants. In particular, Example 7 of the present application shows that programmed cell death, in accordance with the present invention, can be suppressed in yeast by use of AvrPtoB. In view of the ability of the bacterial effector proteins of the present application to suppress programmed cell death in plants and yeast, applicants submit that the claimed invention is fully enabled. Accordingly, the rejection of claims 103-104, 107-108, and 111 for lack of enablement is improper and should be withdrawn.

The rejection of claims 103, 107, and 110 under 35 U.S.C. § 102(b) as anticipated by Nimchuk et al., "Eukaryotic Fatty Acylation Drives Plasma Membrane Targeting and Enhances Function of Several Type III Effector Proteins from *Pseudomonas syringae*," *Cell* 101: 353-363 (2000) ("Nimchuk") is respectfully traversed.

Nimchuk discloses delivering bacterial effector proteins to eukaryotic plant cells. Specifically, Nimchuk demonstrates that several type III effectors from *Pseudomonas syringae* are targeted to the host plasma membrane and that efficient membrane association enhances function. Further, these prokaryotic type III effectors utilize a eukaryote-specific posttranslational modification to access the subcellular compartment where they function.

The pending claims of the present application are directed to a method of inhibiting programmed cell death in a plant or yeast eukaryote by administering to the plant or yeast eukaryote a bacterial effector protein which inhibits programmed cell death. The

PTO acknowledges that Nimchuk does not characterize the administration of bacterial effector proteins to eukaryotic plant cells as inhibiting cell death. Indeed, Nimchuk does just the opposite -- i.e. it induces cell death, also known as a hypersensitive response. By administering a bacterial effector protein which inhibits programmed cell death, the claimed invention is doing the opposite of Nimchuk. Since Nimchuk's effector proteins are not inhibiting programmed cell death, it cannot be properly asserted that they are inherently the same as those used in the claimed invention. Further, applicants submit that the claims are directed to a protein having the amino acid sequence of SEQ ID No. 2 or portions thereof. These sequences are nowhere disclosed or suggested by Nimchuk.

Since Nimchuk fails to teach each limitation of the claimed invention, it cannot be anticipatory. Accordingly, the rejection under 35 U.S.C. § 102, based on Nimchuk, is improper and should be withdrawn.

In view of all of the foregoing, it is submitted that this case is in condition for allowance and such allowance is earnestly solicited.

Respectfully submitted,

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